

**ABSTRACT OF THE DISCLOSURE**

A corrosion resistant component of a plasma chamber includes a liquid crystalline polymer. In a preferred embodiment, the liquid crystalline polymer (LCP) is provided on an aluminum component having an anodized or non-anodized surface. The liquid crystalline polymer can also be provided on an alumina component. The liquid crystalline polymer can be deposited by a method such as plasma spraying. The liquid crystalline polymer may also be provided as a preformed sheet or other shape adapted to cover the exposed surfaces of the reaction chamber. Additionally, the reactor components may be made entirely from liquid crystalline polymer by machining the component from a solid block of liquid crystalline polymer or molding the component from the polymer. The liquid crystalline polymer may contain reinforcing fillers such as glass or mineral fillers.